

ABSTRACT

A control cluster for a pressurized water nuclear reactor comprising a bundle of neutron-absorbing rods each of which comprises a metal tube called cladding which is sealed off by a top end plug at its top end and by a bottom end plug at its bottom end and has a support, or spider, of radiating shape to which the absorber rods are attached through their upper end plugs, characterized in that the cladding of at least some of the absorber rods is weld-free hafnium tubes, the top end plugs of the absorber rods having hafnium cladding being of titanium-based alloy and being welded to the top end part of the hafnium cladding of the absorber rod, the bottom end plugs being of massive hafnium and being welded to the bottom